

Notice of Allowability

Application No.

10/711,287

Applicant(s)

SHORT ET AL.

Examiner

Art Unit

INSUN KANG

2193

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/1/2010 and 4/27/2009.
2. ☒ The allowed claim(s) is/are 1-5,8-15, and 17-22 (renumbered as 1-19).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>20100315</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Krajec (reg. 48,936) on 3/15/2010.

The application has been amended as follows:

1. (Currently Amended) A software diagnostics platform on a device with an embedded processor comprising:

a command interface ~~adapted to~~ configured for receiving test commands from a test host that communicates with the device and outputting test results to the test host;

an I/O engine ~~adapted to~~ configured for running a test sequence for testing the device based on the test commands wherein the engine creates messages that are communicated through a path to a device interface for the device;

an output driver ~~adapted to~~ configured for timestamping an outgoing message of the messages wherein the I/O engine sends the outgoing message over the path to the device interface through the output driver and storing said outgoing message;

an input driver ~~adapted to~~ configured for timestamping an incoming message of the messages wherein the I/O engine receives the incoming message over the path from the device interface through the input driver and storing said incoming message; and

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an analysis routine ~~adapted to~~ configured for analyzing said outgoing message and said incoming message to determine at least one performance parameter of the path;

wherein said software diagnostics platform being operable on ~~[[an]]~~ the embedded processor ~~being operable~~ operates on a single board, and ~~capable of testing tests~~ hardware of said single board; wherein said test sequence comprises multiple threads of the test commands being configured to operate on a single port of the device in parallel.

3. (Currently Amended) The software diagnostics platform of claim 1 further comprising:

a host program operable on the test host ~~a host system~~, said host program having a graphical user interface.

6-7. (Canceled)

11. (Currently Amended) A system comprising:

a device with an embedded processor, said device having a specific function;

a first software system ~~operable to running~~ on said embedded processor and ~~enable~~ enabling said device to perform said specific function; and

a second software system ~~operable to running~~ on said embedded processor, said second software system not able to perform said specific function, said second software system comprising:

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a command interface ~~adapted to~~ configured for receiving test commands from a test host that communicates with the device and outputting test results to the test host;

an I/O engine ~~adapted to~~ configured for running a test sequence for testing the device based on the test commands wherein the engine creates messages that are communicated through a path to a device interface for the device, said test sequence comprising at least two threads of the test commands capable of operating on a single port in parallel;

an output driver ~~adapted to~~ configured for timestamping an outgoing message of the messages wherein the I/O engine sends the outgoing message over the path to the device interface through the output driver and storing said outgoing message, said output driver being configured to send said outgoing message to each ~~of said first number~~ of output ports;

an input driver ~~adapted to~~ configured for timestamping an incoming message of the messages wherein the I/O engine receives the incoming message over the path from the device interface through the input driver and storing said incoming message; and

an analysis routine ~~adapted to~~ configured for analyzing said outgoing message and said incoming message to determine at least one performance parameter of the path.

16. (Canceled)

21. (Currently Amended) A test system comprising:

a reusable test sequence;

a first command interpreter ~~adapted to~~ configured to interpret said reusable test sequence,

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said first command interpreter being ~~adapted to~~ configured to operate on a first embedded processor, said first embedded processor being in a first circuit having a first functionality; and

a second command interpreter ~~adapted~~ configured to interpret said reusable test sequence, said second command interpreter being ~~adapted~~ configured to operate on a second embedded processor, said second embedded processor being in a second circuit having a second functionality, said second functionality being different from said first functionality;

wherein said first command interpreter and said second command interpreter each comprise:

a command interface ~~adapted to~~ configured for receiving test commands from a test host that communicates with the first and second circuits and outputting test results to the test host;

an I/O engine ~~adapted to~~ configured for running a test sequence for testing the first and second circuits based on the test commands wherein the engine creates messages that are communicated through a path to a device interface for the first and second circuits, said test sequence comprising at least two threads of the test commands configured to operate in parallel on a single port;

an output driver ~~adapted to~~ configured for timestamping an outgoing message of the messages wherein the I/O engine sends the outgoing message over the path to the device interface through the output driver and storing said outgoing message;

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an input driver ~~adapted to~~ configured for timestamping an incoming message of the messages wherein the I/O engine receives the incoming message over the path from the device interface through the input driver and storing said incoming message; and

an analysis routine ~~adapted to~~ configured for analyzing said outgoing message and said incoming message to determine at least one performance parameter of the path.

22. (Currently Amended) A method of developing a circuit having an embedded processor comprising:

designing a circuit having said embedded processor, said circuit having a predefined function;

assembling said circuit;

designing software operable on said embedded processor, said software ~~adapted~~ configured to enable said circuit to perform said predefined function;

loading said embedded processor with a test platform software comprising:

a command interface adapted to receiving commands and outputting results; a command interface ~~adapted to~~ configured for receiving test commands from a test host that communicates with the circuit and outputting test results to the test host;

an I/O engine ~~adapted to~~ configured for running a test sequence for testing the circuit based on the test commands wherein the engine creates messages that are communicated through a path to a device interface for the circuit, said test sequence comprising at least two threads of the test commands configured to operate in parallel on a single port;

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an output driver ~~adapted to~~ configured for timestamping an outgoing message of the messages wherein the I/O engine sends the outgoing message over the path to the device interface through the output driver and storing said outgoing message;

an input driver ~~adapted to~~ configured for timestamping an incoming message of the messages wherein the I/O engine receives the incoming message over the path from the device interface through the input driver and storing said incoming message; and

an analysis routine ~~adapted to~~ configured for analyzing said outgoing message and said incoming message to determine at least one performance parameter of the path and ~~create~~ creating results of the analysis; and

a display routine for displaying said created results;

creating said test sequence;

transmitting said test sequence to said embedded processor loaded with said test platform software;

operating said test sequence on said embedded processor; and

analyzing said created results.

23. (Canceled)

2. The following is an examiner's statement of reasons for allowance: see the remark filed on 4/27/2009.

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Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to INSUN KANG whose telephone number is (571)272-3724. The examiner can normally be reached on M-R 7:30-6 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lewis A. Bullock, Jr. can be reached on 571-272-3759. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Insun Kang
/Insun Kang/
Primary Examiner, Art Unit 2193